Student Background and Implications for Design of Technology-Enhanced Instruction

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Abstract: Knowledge of students' construction and technology background is an important input to the process of designing technology enhanced instruction. Current literature in student background is either not specific for the construction/civil engineering student population or lacks direct implications for pedagogical design. This paper presents a survey study that assesses students' self-reported technology skills and attitude, learning preferences, and baseline construction knowledge. The survey is designed as a questionnaire with three sections: demographic and background information, technology attitude and exposure, and construction-related knowledge. From the 280 data points collected, it was found that today's students are exposed to a wide range of technology applications. They had a positive attitude toward technology, were enthusiastic video-game players, and strongly preferred learning activities that involved interactions, whether these interactions were face-to-face or mediated by technology. These findings suggest that technology-assisted learning would excite and engage students. The paper also provides a discussion on specific pedagogical design implications of the findings and ways in which these could be incorporated in the design of technology-enhanced learning tools.

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